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THE PNEU SCHOOL  
TEACHER'S HANDBOOK  
FORMS III, IV & V

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A. GENERALIntroduction

As a parent who has assumed responsibility for a child's education, you will undoubtedly derive considerable satisfaction from seeing at first hand your pupil's progress. His success as a pupil must depend to some extent on your performance as a teacher and in the task you have undertaken you will probably learn as much as he does.

While the child is acquiring skills or learning facts you will gather something of how the young mind responds to intellectual stimuli of various kinds and how it develops at an irregular rate toward maturity. The child will learn much from his mistakes; this is equally true of his teacher who should, after a particularly rewarding (or disappointing) session, attempt a little self-searching and try to discover the reasons for its success or failure.

The Learning Process

It has been said that there are no bad soldiers, only bad officers. It would be going too far to suggest that there are no bad pupils but only bad teachers. However, children do respond positively if they are skilfully motivated and are much more likely to make consistent progress when they are ably taught. The biggest spur is INTEREST.

Every parent knows that a child will listen attentively to an interesting story, i.e. one which will focus and hold his attention to the point where he can easily recall its detail. If the child loses interest, his attention will wander and his capacity for learning when this happens is very low indeed.

Yet it must be freely admitted that it is simply impossible to make all learning interesting. Many children find the learning of, say, multiplication tables extremely dull and have difficulty in mastering them. It is when faced with such a teaching situation that the teacher must apply a little elementary psychology. The solution to the problem of hard core learning can often be resolved through ATTAINMENT and SUCCESS, blended with a judicious amount of PRAISE. The child should at first be set a limited target - that is one considered to be well within his known capability.

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He should be tested to see whether he has mastered that particular fact or process so that he can demonstrate that it is known to the teacher and himself. This brings a sense of achievement which whets his appetite for further success and deserves praise which in turn is likely to give confidence and reinforce his efforts.

At the next lesson, a certain amount of revision is necessary to overcome any forgetfulness and to remind him of what had been learned. The next facts or processes can then be learned, the teacher judging the amount to be covered and the speed of progress. To some extent, methodical teaching and memory training have been overlooked in modern education but it is an essential part. The ability to recall and reproduce knowledge plays no small part in academic success.

The teacher must therefore combine an approach through "inspiration" and "perspiration" to maximise a pupil's learning capacity. It is a good thing for the pupil to be set some work which he is unlikely to perform without mistakes and without effort, while ensuring that real interest and a desire to continue learning are not diminished or destroyed.

Some of this type of factual learning consists of things like tables, irregular verbs or scientific groups which are logically constructed. However, other things like spelling do not follow a recognisable pattern, as we all know to our cost. The teacher must decide with each pupil how far to push repetitive learning of this kind.

It is not being suggested that the child should be set work which he finds beyond him. Nevertheless the approach outlined above can yield good results particularly with the learning of facts which are interesting not for themselves, but which form much of the groundwork on which skills in literacy and numeracy depend.

Praise has already been mentioned. When properly used it can stimulate a pupil to further effort. It is a currency which can be very easily debased and ought generally to be used to encourage effort rather than the level of attainment. A bright child who easily learns an arithmetical process has not earned the praise which a less able child merits - a child who has perhaps struggled desperately to achieve the same result but without the same degree of success. Slip-shod, careless work is never to be accepted and the teacher's reaction to it should be a firm, objective "You must repeat

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this piece of work. It is not up to your standards - or mine". It should not be an emotional tirade nor a sarcastic comment which will discourage the child but put in a way which will cause him to see that the classroom is a place where standards are expected, and obtained. It should be quickly passed over.

#### Acting a Part

The adoption of a professional attitude by the parent in the home schoolroom is not, however, as difficult as it might appear at first, in spite of the emotional ties which play a large part in daily family life. To be a parent is to be a teacher and to be an actor. Parents play many roles, some straightforward, some assumed. Father will be a fellow footballer or a chauffeur, a mother a nurse or dietician; both will have to be stern at times when they have difficulty in restraining laughter. What matters is that the parents are loving, concerned, generally rewarding and non-punitive.

Teaching will thus be another, though considerable, part to be added to the repertoire. While formal work should be kept to the schoolroom, discussion can be carried on at any time. It is recognised that conversation between parents and children is the most valuable form of activity possible.

Nor will the child confine his learning to any one situation. He will be acquiring knowledge most of his waking hours as he comes along. Parents can expand the environment. Parents can provide the broadest possible range of worthwhile experiences alongside the formal school work.

#### Early Adolescence

The child of today reaches puberty and adolescence much earlier than in the past so that by the age of 12, allowances must be made for the emotional, as well as the physical, changes taking place. The warm, easy relationships of earlier years may be disturbed, with the child swinging from dependence to a semblance of rejection. It is now that school work becomes more complicated and harder, when a less gifted child finds it an increasing effort to keep up the pace.

A pupil who has mastered the basic skills is in an advantageous position since progress will depend on this mastery

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of language and number. By this time, the child will be in the pre-adult stage where he can deal with abstract relationships.

#### Intelligence

Although the part which intelligence plays in learning has become a matter of controversy, it is generally accepted that inborn intelligence or reasoning power determines in large measure how well a child learns and that his background and environment what he makes of his natural gifts. Intelligence is made up of a general ability component and particular abilities to varying degrees, such as mathematical, mechanical, musical and verbal components.

By 16 intelligence is all but fully developed and in the secondary stage of education the gap between pupils of higher and lower ability widens. Learning can become more of a burden even to children of average ability by about the age of 14 and, coupled with the emotional instability and uncertainties of adolescence, makes teaching a more difficult affair.

#### Values

Education is also concerned with appreciation, imagination and creation. Although in practice it is impossible to separate them, it is probably with appreciation that a child's development begins. The small child who chuckles and obviously derives pleasure from an oft repeated nursery rhyme, may be on the way eventually to a deep appreciation of Beethoven's Ninth Symphony. Long before he reaches that point, however, his own imagination adequately stimulated may have led him to compose a musical jingle of his own. Before he can appreciate great works of literature simple stories told him by his parents may have stirred him to create an original story of his own. Certainly he will have tried to draw and paint before he can appreciate Rubens or Picasso.

The continuous inter-related processes of appreciation, imagination and creation will be developed by use and it is to be expected hopefully that qualities of taste and judgment will result as a consequence.

#### B. ORGANISATION

The PNEU School year consists of three terms each of 12 weeks. The last week of each term may be devoted to revision and assessment.

The programmes indicate the amount of work to be covered in each subject. The textbook pages specified for each term's work contain the material which could, on average, be covered.

The approximate number of pages to be covered each week, therefore, is found by dividing the total number of pages by the number of weeks in your term.

The timetable for each form is a guide to the length and arrangement of lessons. It may, of course, be modified to suit local conditions but variety and balance must be preserved. Once the timetable has been constructed it should be followed regularly.

#### The Lesson Form

##### (a) Preparation

The teacher must carefully prepare her material before presenting a lesson. If she has done this well her own confidence and her pupil's will be increased.

For Mathematics this might mean checking up on her own skills beforehand. For subjects like History and Geography it might mean some reading around the subject beyond the limited scope of the child's own textbook. In these and practical subjects like science and art and craft, materials will have to be prepared.

##### (b) Delivery

There obviously is no standard pattern for the lesson form but in many subjects a useful way to proceed is as follows:-

- (i) Recapitulation of previous work by question and answer.
- (ii) Development, i.e. breaking new ground step by step by:
  - Narration and explanation by the teacher  
or
  - Learning by the pupil from the textbook  
or
  - Demonstration of processes by the teacher  
(e.g. the stages by which decimals are converted into fractions).
- (iii) Discussion between teacher and pupil to clarify difficulties and ensure complete understanding.

(iv) Questions or exercises oral or written, answered by the pupil which will provide evidence of his success to himself and his teacher.

A lesson prepared on these lines has a form of its own. It is varied (and within limits variable) and providing the material selected is suitable to his aptitude and ability, the pupil's interest should be sustained fairly easily.

#### Private Study

As a child matures he should be encouraged to work on his own. He must be taught how to make the most efficient use of his time. A useful technique for the pupil to acquire is the ability to make his own brief notes from textbooks. One way to teach the skill necessary is for the teacher to begin by selecting a short story or a narration passage from a history textbook. The teacher should assemble about ten questions the answers to which will bring to light the essential facts in the selected passage and these questions a pupil should be given before he is asked to begin his reading. The correct answers to the questions should, taken in order, provide a useful summary.

As exercises of this kind are developed, the number of questions should gradually be reduced and the pupil asked to write short succinct sentences of his own, until eventually he learns how to reduce an informative text to its bare essentials. It is advisable in the early stages to insist on complete sentences but as the pupil acquires the technique he should be allowed to use his own form of improvised shorthand.

#### Communication

The writing of essays is, of course, taught in English language lessons and the skill so acquired has to be employed in most other subjects except perhaps mathematics and some specialised aspects of certain sciences. A child who knows facts about history, geography, literature, biology, music, etc. but who is unable to marshal and present them well expressed in a logical sequence, will achieve little success in later examinations.

It goes almost without saying that he will fail to communicate unless his writing is legible, his sentences are grammatical and his thought processes are logical.

Presentation of Written Work

Every piece of work completed by the pupil should be given a heading (a title for an essay, an exercise or page number for a series of mathematical problems). It should also be dated. The number of each example should appear in the lefthand margin which should be about  $\frac{1}{2}$ " wide. It is useful in Mathematics to have a somewhat wider margin on the righthand side of the page in which the pupil can do his rough work and which, if necessary, the teacher may check for its accuracy.

Teacher's Record

The teacher should keep a diary which is a daily record of what has been done in each subject. It is a little more trouble but well worth the effort to maintain a subject record as well. This can be made up weekly from the daily diary. It is then possible to see at a glance how progress is being made with each particular subject syllabus at any point of time in the school year. An ordinary exercise book is adequate for keeping records in.

Conclusion

Teaching is not a science. If anything it is a craft. Therefore it is impossible to lay down hard and fast rules as to how it should be approached. No two teachers tackle the job in precisely the same way but it is hoped that what has been written here you will find helpful and useful. The only thing that can be said about teachers as a whole, is that in practice the most successful are those who have a natural sympathy for and with children, devoid of sentimentality.

CURRICULUM SUBJECTSRELIGIOUS KNOWLEDGE

The PNEU Home School regards a broadly based Christian belief as a fundamental part of education. It is recognised that the School includes families with a wide variety of beliefs and they may wish to omit this subject or use the material in a different way, e.g. on a comparative study of religions. When the time allocated is reduced, the teacher should allocate lessons in the light of the pupil's needs.

Unless a parent is very familiar with the Authorised Version of the Bible, it is advisable to use one of the modern translations suggested on the programme. The Jerusalem Bible is especially useful for the way in which the Old Testament books are set out; poetry is differentiated from prose and the meaning of the text becomes much clearer.

The aim of the Bible lessons is that the pupil gets to know the biblical books chosen. At this stage it is not necessary for these to be studied in very great detail.

The One Volume Bible Commentary is recommended for the use of the parent who is doing the teaching in Form III. In the later forms it is meant for the pupil's use. Its greatest value is in its clear and concise comments on the books of the Old Testament. These are difficult and often obscure because of the literary conventions of the time when they were written and help is needed from a commentator in tracing, for example, the line of Messianic prophecy.

The Gospels and the Epistles are not difficult in the same way. They need attentive reading rather than access to reference books. All four Gospels say very clearly what they mean. St. Paul does the same in the letters he wrote to the first Christians but sometimes he packs a great deal of teaching into a few sentences and all his writing demands very careful reading.

If two lessons weekly are taken up on the Old Testament and two on the New Testament it will mean twenty-two lessons for each during a term. It will be a help to work out at the beginning of the term which sections of the reading should be covered each week. These may differ very much in length because some short passages in the

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prophecies or in the Gospels are of very great importance and call for careful consideration and discussion while other much longer passages need only be read.

Time should also be allowed, particularly with older pupils, for discussion on topics associated with religion - moral values, problems of today, or personal relationships.

### ENGLISH LANGUAGE

Spoken language must be given equal rights with the written word in this subject. Over-emphasis on written expression can produce the kind of adult who is able to set down his thoughts on paper but totally lacking in the ability to express these thoughts in conversation or to give clear directions.

The Art of English series attempts to bring this balance to the subject and the discussion sections should not be put aside although some exercises will obviously be inappropriate for one pupil. It is not advisable to decide that because a child is showing some facility in written expression oral work should be dropped. The idea that oral work is meant for slower children and written for the more intelligent is misguided.

Living language is what is needed. This must be kept in mind where written expression is concerned. If ten words are needed to do justice to an idea then do not let the child cut down the ten and make do with a lazy half-truth but never encourage a child to use two words when one will do.

It is senseless for anyone to write on a subject when he has nothing to say. Rather the child should be encouraged to think of something worth saying and to say it as clearly as possible. This holds good for both the written and the spoken word. No pupil learns to speak or write good English by doing exercises. The value of these is to make him fully aware of something he already knows. A child must be competent in using his native language before there can be any question of studying it. If the native language is treated as though it were a foreign tongue there is bound to be a feeling of unreality about the English Language classes.

### Practice and Reference

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Reading: The parent should see that the child can, in fact, read and understand all his books. Practice in reading aloud from the set books during lessons will help fluency and also pin-point any difficulties.

Writing: By this stage pupils should be able to write with ease. Handwriting is not the first consideration in language work but it should always be pleasant and legible. If help is needed we recommend the Everyday Writing series.

Dictionary: All pupils must have a good dictionary and be encouraged to use it for all subjects. Reference to a dictionary should become a matter of habit and it is well worth spending some time teaching the pupil how to use it.

### LITERATURE

The aim in this subject is to provide the pupil with a range of well-written books in a variety of styles. It is not intended that every sentence should be studied and analysed, as this type of exercise tends to kill rather than enhance the pleasure and appreciation of the book. The reading can and should, however, be followed by discussion of plot, character, language and so on, which will in turn lead to written work on these topics and often to further reading of books by the same author or on similar subjects.

It is advisable to maintain a good balance here between written and spoken work and between informal discussion of impressions, likes and dislikes, and more carefully directed studies of specific aspects of the book.

### Prose

Since a whole term is allowed for each set text, these will be approached in a different way from the books read in the pupil's leisure time. There will be an opportunity once a chapter or two has been read, to talk about how the plot is developing, what the pupil feels about the characters and their reactions to the situations in which they are placed. The lessons can take various forms. There could be a set of factual questions to be answered by reference to the book. One or more of the characters could be taken in detail and notes made so that by the time the

book is finished these notes could form the basis of a thorough study of the way in which the person is portrayed, his good and bad points, his attitudes and so on.

One or two suitable pages might be chosen for detailed study of the language used: a descriptive passage, for instance, could be examined to discover how well it presents a picture of the scene to the reader and how the atmosphere is created; while in a section containing dialogue, one could discuss how realistic the speech of the various characters is likely to be and, in a book set in the past, how different the spoken language is from that of today.

Myths and legends provide an extremely useful background to an understanding of the culture, literature and history of Europe and it is worthwhile making sure that the books are read with care. Discussions and questions here should aim to help the pupil to retain in his mind the chief figures of the legends and their main exploits and characteristics.

#### Poetry

Poetry, more than any other form of literature, can easily be spoilt for the younger reader by too much analysis and by an over-emphasis on the need to read the most 'worthy' and most famous poems. On the whole the pupil will be happier if he is given a chance to choose for himself what he would like to read from as wide a range of poems as possible. The parent can, however, often guide his choice by suggesting poems which it is felt will appeal to the child. Material from anthologies other than those set should be used freely where available.

A poem should be read aloud by either parent or child and it may be helpful to read it several times before any discussion takes place. Some background to the poem, referring either to the poet or his subject matter may sometimes be given if it is felt that such information will help the pupil's understanding, but often this is not necessary.

When the subject of a poem interests the pupil he should be encouraged to talk about the poem but the focus should always be on the words of the poem itself. Care should be taken that poetry is not used for exercises in comprehension or analysis, although the child will need difficult words or passages read to him. Indeed many poems are written in a manner which defies an adult's understanding. If it is the sound of the words or the rhythm of the poem which

impresses him, these aspects should be followed up.

Similarly discussion should always arise from the reactions of the pupil rather than be imposed by a well-meaning but misguided teacher. Although the aesthetic appeal is thus foremost, the pupil will unconsciously be taking in forms of speech such as simile and metaphor, alliteration and onomatopoeia without those rather daunting terms ever being used.

Once a pupil is used to this type of discussion he can be asked to choose a poem for himself and explain what he feels about it. He should be encouraged to learn all or parts of his favourite poems by heart, an accomplishment which many children find enjoyable, if it is not made a burden.

At other times, or as an alternative to reciting from memory, the pupil could occasionally prepare a poem to read aloud as fluently and effectively as he can. Poems may be rendered with feeling even though it is fashionable today for poems to be read quietly.

Needless to say children should be given opportunity to write their own poems and they should come to appreciate the difference between a poem in metre which scans and rhymes and a free poetic composition.

#### Plays

The parent should bear in mind that a play is intended to be heard and seen and the script is a substitute for the spoken word. It is best therefore if the play is read aloud, the parent and the child (with other members of the family if possible) taking the various parts. Records of Shakespeare's plays are often obtainable on loan from libraries and other organisations both in England and overseas.

Discussion and written work on each scene or act can follow the lines suggested for poetry and prose texts, covering characters, action, the type of language used, comedy, atmosphere, etc. Once the whole play has been read, the last few lessons of the term could well be spent on the more concrete aspects of the play. Most pupils will enjoy visualising how the piece can be presented on stage, the movements of the actors, the costumes and settings. It should also be possible to prepare a scene to be performed with improvised scenery and costumes, especially if other members of the family and friends are prepared to join in.

MATHEMATICSTeaching

Pupils at this stage are faced with very challenging work in Mathematics. It is worth remembering that children of this age at school would be taught by a teacher specialising in this subject. The books recommended on the programmes all give clear and detailed instructions but they are not intended for a pupil to use unaided. A great deal of help will be needed and the person doing the teaching must have a complete grasp of the mathematical concepts.

If specialist help can be obtained this will be the best solution. If this is not possible the parent who is doing the teaching must be prepared to do a great deal of work. It is not sufficient to try to keep one lesson ahead of the pupil. If it is simply a matter of refreshing the memory it is necessary to be three or four topics ahead and if it is a matter of approaching a new topic all the exercises should be worked through and the whole topic studied until it is thoroughly familiar long before it is made the subject of a lesson.

Mathematics - what is required

The textbook used is New General Mathematics by Channon, McLeish Smith & Head. It has been widely adopted and is a fusion of conventional and new mathematics. Teaching Mathematics beyond the primary stage is admittedly difficult and the following notes are designed to elucidate some basic points.

Mathematics claims a place in any educational scheme on three grounds:

1. The utilitarian role in everyday life and as a language and tool of science.
2. Its concern with pattern and relationship.
3. Its structure of clear, logical argument used in the solution of problems.

It is important to encourage skill and accuracy in the basic manipulation of numbers. The fact that nowadays much computation is carried on with the aid of computers does not alter the objective that each child should be equipped to carry out such computations as might be needed in ordinary life.

With some children it often happens that insecurity in the basic arithmetical processes creates a barrier to progress in

other directions and the child loses confidence. For example, a child who is able to give the length of a rectangle having an area of 10 square metres and width 2 metres may be unable to begin if the area is given as 9.5 square metres and width 1.7 metres. Panic brought on by the prospect of having to calculate with decimals has clouded understanding. There is a need for some repetition and revision for the development of skill in simple procedures.

Patterns abound in our everyday environment and one of the purposes of teaching mathematics is to study not only the patterns themselves but the underlying structure. It is precisely at this point that the teacher's own understanding and knowledge becomes important. It is not sufficient to try and keep one lesson ahead of the pupil. The parent who is doing the teaching must be prepared to do a great deal of work and read several topics ahead to try and perceive this underlying structure. For example, in the past school algebra has been thought of largely as generalised arithmetic, but it is now considered to be much more than this. It is the study of operations and relations and structure. We still teach equations, factors and formulae and in this work the letters represent numbers, but also algebraic notation and methods are used to develop the understanding of number relationship. This kind of elementary algebra is certainly a natural expression of arithmetic, but its symbolic representation is also used in non-numerical situations such as the study of space and the representation of a practical situation as an abstract model.

Initially a pupil needs considerable guidance on how to set about solving a problem. First the problem should be pulled to pieces, the given facts noted and understood; then a plan of action decided upon. Often progress comes to a halt because one of the given facts has been overlooked. Neat and good presentation should be encouraged. Explanations should be written in such a way that they would make sense to any reader. Reading out aloud what has been written will emphasise this to the pupil. The development of the power to interpret information, to use imagination and make judgments in mathematics draws upon the facility in spoken and written English.

HISTORYWhy we teach History

There is no unanimity about why history is taught or how it should be taught. To say that children need to learn about the past is easy especially with young children, but as they grow up we have to ask which period or periods they should learn about and in what detail. They should not be drowned in facts nor led to make doubtful judgments. If they are to learn about outstanding characters in history, there must be some reason on which their selection should be based.

It is typical of the modern approach that social rather than political history should be a focus of attention. To the extent that it makes us aware of how people act together it is useful and usually more interesting.

History in the past was in part a justification, even a glorification, of one's own country's history. Now we try to avoid bias or a stress on nationalism. In so doing we may remove what history also inculcated - a love of one's country or patriotism. But in the world of today young people need to acquire a sense of belonging to a region, to a nation and to a world which is increasingly inter-dependent in spite of all its divisions and crises. In other words, history should encourage citizenship.

In course of time, pupils should come to understand the great historical movements as something real. The movement of peoples through the ages, the growth and decay of empires, the growth of the modern world through technological change are basic to an understanding of our own times.

As the child becomes a teen-ager, it is essential to use history as a means of training judgment, the appreciation of accuracy and the ability to differentiate between an opinion, an assertion, a half-truth, a theory and a fact or authentic conclusion. It is asking too much of any pupil to expect this ability to develop to any extent until the last years of school, if then, but exercises and discussion in clear thinking and interpretation are desirable.

This example makes the point :

Fact British troops evacuate France in 1940

Opinion (German) British Army decisively defeated.

Opinion (British) British Army rescued from defeat.

In military terms facts are often manipulated by expressions such as "planned retreat" or "strategic withdrawal" and even in ordinary conversation of social convention meaningless phrases are used such as "He is as well as can be expected" of an old man who is at death's door. In places where newspapers are available, a useful exercise is to compare both factual reports and comments published by newspapers of different party complexions and ask the pupil to elicit the facts - if he can!

The student must try and arrive at the truth in his search for knowledge and he must not assume that because it is in print it is therefore true. When he has the facts and understands them, he will be able to draw his own conclusions and form a valid opinion which will stand up to critical scrutiny. This is one of the main purposes of education.

Methods of Teaching

As history is no longer a conglomeration of dates and seemingly irrelevant facts, so teaching is more complicated. Learning by heart is still important but it should be selective. It is desirable to concentrate what is to be learned in as brief a compass as possible; brief notes, maps and charts should be made.

Teaching and learning should be made as colourful as possible. Modern books and other aids, including television broadcasts, if available, are of great assistance. The pupil should try to cast himself in the role of a historical character or an onlooker at vital moments such as battles or great events like Trafalgar or the Great Fire of London. When role-playing, his part should be adjusted to his age and ability. A young child finds it easier to be an explorer or soldier than a politician or scientist. Girls and boys should not be kept to one sex only. He might imagine that he is Lloyd George and write a speech on his 1911 Budget or that he is a supporter of the Chartist or another movement. There are other possibilities - he could write the campaign speech of an aspiring Member of Parliament for a particular election or write a letter to the paper supporting the Suffragettes. He should not always see things through British (or English) eyes but could imagine himself to be George Washington or an Indian in the days of the Raj.

Use should be made of illustrations, maps, literature and other material. At these ages, time sequences begin to have meaning so that charts and time-lines assume more

importance. Visits to museums or other places of historical interest should be made whenever possible.

### Local History

A pupil should learn that History is not always something that happens elsewhere and should be encouraged to find out what he can about the History of the place he is living in from its stories, books (if there are any) and the talk of the people. Legends are as important as more factual History; they can be a means of understanding the findings of archaeology and can tell us a great deal about the people who produced them.

The pupil can make his own record in any suitable form from a book compiled by himself to drawings, photographs and diagrams. Discussions with people, particularly the elderly, should be encouraged along with visits. Simple field-work may be attempted. There are few thrills to equal the discovery of a worked flint or the outline of an abandoned settlement.

### GEOGRAPHY

To say that geography attempts to relate man to his natural environment does not carry us very far. A child living in an agricultural community with a simple economy will understand the importance of rain, sun and soil to a farmer, but a child living in Wolverhampton or Paris, lives in a far more complex society, where 'food' means a supermarket or deep freeze, where work means an office or factory and the 'country' something attractive but of little significance. By the middle years of schooling the pupil should begin to understand the complicated inter-relationships of the modern world. To do so means acquiring a broad knowledge of basic geographical facts - old-fashioned geography true, but essential. On to this must be added some scientific information about the earth's structure; climate and weather; and botany (for vegetation). The human sciences play an equal part - the world's peoples (anthropology) and economics. Geography makes a synthesis of many studies but straightforward description is important. We can describe our own local surroundings, a chosen area, a region, a country or the world itself. In so doing, we have to generalise and may be guilty of half-truths. In moving from the local area to the world, we go from the

small scale to the large scale, from the particular to the general, from the known to the unknown. In all our work we should not lose a sense of wonder at the human and natural resources of the globe.

Geography has an aesthetic appeal - few can resist the attraction of photographs of mountain peaks, of tropical jungles or of exotic peoples even if we cannot go there. The story of exploration holds many children - the great voyages of discovery, the opening up of America and Africa, the space exploration of our own time.

Perhaps the most distinctive quality which can be acquired by geographical study is an eye for landscape. The geographer need never be bored for in town or country he is a constant observer of land-forms and contours, of farmland and forest, of settlements large and small. The "cultural landscape" made by man is ever-changing and full of interest. Geography is fortunate in having well-written and well-illustrated textbooks containing exercises with each chapter which the pupil can work through. Not only should maps, diagrams and photographs be studied, but, where appropriate, be copied. The sketch map is an important part of the secondary stage geography syllabus and pupils should practice making them. The emphasis is on a sketch which indicates simply but clearly the main features of a geographical situation. They should be prepared rapidly but indicate the purposes for which they were drawn.

Fieldwork becomes a vital and rewarding part of geographical work as the pupil grows older. Many PNEU pupils are admirably placed to carry out surveys and enquiries into local areas ranging in size from a farm to a village. Land use surveys can be made, communications studied. The small scale map, whenever obtainable, is an essential tool of the geographer and as much pleasure can be obtained from reading a map as from a book. In Britain ordnance survey maps are available (1 : 50,000 scale).

The pupil should attempt to study the following topics in his own area and keep a fieldwork notebook for maps, diagrams and information collected:-

- Physical Geography - soil and rock types and landforms
- Climatic conditions - including vegetation
- Minerals: Agriculture: Industry:
- Settlement patterns - cities, towns, villages, etc.
- Communications

Such fieldwork can often be linked with the study of local history, visits to museums, factories, farms, etc.

### SCIENCE

Piaget's findings that children pass through three stages of intellectual development are generally accepted. At eleven or twelve many children will still be in the second stage when they get ideas from practical experience so that much of the material in the course for Form III is treated in this way.

From about 12, children move to the third and final stage. Now they can begin to make generalisations involving abstract ideas. They can understand hypotheses and carry out experiments to test them. Briefly, they will have moved from a stage where action precedes thought to one where thought precedes action.

This growing ability to think logically about abstract as well as concrete concepts will be needed in many aspects of their lives and must be carefully developed by suitable exercise. Continuity and relationships between different parts of their work are also important to grasp.

The science work for Form III is taken from the Scottish scheme "Science for the 70s". This is a highly structured course which provides enough material for two years' work. Objective tests are included in the Teacher's Guide. Although the availability of laboratory facilities and scientific apparatus is a desirable asset, it is possible by careful selection and some modification of the material to provide an experimental course without them. In spite of the difficulty which families overseas, who lack the means of obtaining or making equipment, may find, they should be able to carry out substantial sections. If not, they should work from the alternative Biology course, given in the Programme. If specialist assistance with science teaching can be found, it will be of help.

For teachers in this country or places where purchases can be made, the following steps are recommended. A camping stove or spirit lamp can be used as a source of heat. Weighing can be carried out on kitchen scales, or a home-made balance. Circuit boards are not essential. Small items, like wire, bulb-holders and electric motors can be obtained from hardware stores and model shops. Pharmacists stock simple chemicals and glassware. The

latter should be suitable for heating.

Science work at this level has many hazards for the inexperienced teacher. Chemicals, e.g. Millon's reagent and other mercury components are toxic, others, like bromine, are corrosive. Eyeshields should always be worn when chemicals are heated. Qualified help and advice should be sought whenever possible.

Forms IV and V science work normally involves specialised study in one or more of the three main branches, Biology, Physics and Chemistry. Of the three, Biology makes least demands on laboratory facilities and equipment. For this reason, only Biology has been programmed at this level, but much useful knowledge and understanding of the other two branches can be acquired by reading suitable texts. Parents requiring further advice in these areas are invited to write to the Director.

### LANGUAGES

French and Latin are included on the PNEU programmes. It is not recommended, however, that the pupil should study these languages unless he is able to work with someone who is thoroughly familiar with them. It is often possible to find someone locally who is willing to help with the teaching of French or Latin if the parents are not able to teach it themselves. If, however, one of the parents speaks another language it is preferable for the child to study this and, in the case of the major European languages, the School may be able to give advice on books. A child living abroad should take the opportunity to learn the language spoken locally, especially if his stay in the country is prolonged or if the language is one which is used widely.

Pupils should work steadily through the chosen textbooks and it is important that each grammatical point is grasped before moving on to the next. The aim in studying a modern language will be to achieve fluency in speaking and reading and, eventually, in writing it and this will only result from thorough learning of the basic grammar and vocabulary. At the same time, however, conversation and reading can and should be introduced from the early stages even though they involve the use of words and forms which have not yet been studied.

PICTURE STUDY

This subject is one which most children can enjoy and benefit from if they are given the proper guidance. The PNEU books of reproductions give children an excellent opportunity to become familiar with great artists and pictures. The work of many artists is studied since a different one is chosen each term and in selecting the pictures an effort is made to show as many aspects of the painter's work as possible.

Parents who are not very familiar with Art need not feel daunted by the idea of teaching Picture Study; teacher and pupil can learn together very successfully in this subject, and the parents will have the notes in the PNEU Journals and the information in the various books of reproductions to help them. Advice on suitable reference books can be obtained from the School and some books can be borrowed from the PNEU Library.

Background information will make the lessons more enjoyable and more profitable. It is worthwhile discussing the artist, the life he led, the period in which he lived, any important events or people that influenced the style or subject matter of his painting. Naturally a visit to an art gallery is extremely valuable and will give the pupil an opportunity to get to know a wider range of paintings, to make comparisons between new and familiar works and to see the originals of some of the paintings he has studied with all the depth of colour and texture which cannot usually be appreciated fully from reproductions.

The Picture Study lesson could begin with, say, five minutes quiet study of the chosen painting, in which the pupil becomes thoroughly familiar with all aspects of it. This can be followed by discussion of the painting and the pupil's reactions to it. Background information on the artist can be introduced here and the picture could perhaps be related to its historical setting or compared with other works already studied. Some pupils may also enjoy sketching a part of the painting at this stage.

There are many points to look for in a painting and the pupil might begin by considering the general form and pattern of the composition and then look more closely at what is happening in the picture and how it is portrayed. Next he might note what colours have been used and how they have been applied, the texture of the painting, whether the

brush work is fine or bold and so on. Another interesting aspect of many paintings is the way in which light is used, from what direction it appears to strike the people or objects depicted and how the quality of the light affects the atmosphere of the painting. The use of perspective, the proportion and balance of the composition and the sense of movement are all points worth looking for in many paintings.

Pupils will not, of course, like every painting they study but, as in the case of poetry, it is useful to move on from the simple expression of likes and dislikes to a closer examination of the work in order to discover the reasons for these reactions.

ART AND DESIGN

The aim of the course is to stimulate children's growth as significant individuals in their own right, particularly as they reach adolescence. Art must be an individual, free experience through which the young person can express himself and develop confidence in his ability to convey his thoughts and feeling in a range of materials. To encourage this needs good teaching carried out with sensibility and understanding.

The ideal teacher is nature itself. No matter where we are, our surroundings are filled with an infinite range of examples which show how nature contains unity, structure, organisation, contrasts, rhythms and forces. Nature is an unlimited source of visual stimulus.

Throughout his existence man has fashioned his environment to survive, but he has also responded to it as a means of self-expression in images and forms either drawn, painted or constructed in a variety of materials displaying the fundamental visual elements of line, shape, texture, tone and colour. To approach these means acquiring "visual awareness" or "visual literacy". Careful observation and recording, as in science, will permit the pupil to analyse, select, record and criticise and to express himself more competently, both visually and in his own language.

Course Structure

1. Visual exploration: the pupil should always carry an A4 size sketch book and a plastic bag for collecting materials, some of the latter, such as pebbles, flowers, seed-heads, etc. may be collected or displayed.

2. The next step is to model, draw or paint from these specimens.
3. Finally, from pencil, pen, charcoal or colour studies, the final works of art emerge as paintings, collage, printing or from other materials such as clay or textiles.

#### Practical Advice

A suitable working area is important to remove worry about spilt paint or water. Other requirements are an overall (an old shirt or apron will do), a work top (an old table in a garage or spare room), some arrangement for keeping materials (boxes, a tray, jar or tins for brushes, larger ones are safer), a cloth for mopping up, plenty of paper (sugar paper in different colours is best), suitable material for collages (e.g. wallpaper pattern books, colour supplements). Scrap materials like fabric, string, metal etc. should be kept in a bag along with beads, buttons, wooden articles, etc.

For modelling, carving and construction a small workbench is helpful with simple tools like pliers and rasps. Adhesive will be needed. Work should be out of doors whenever weather permits.

#### Visual Education

To supplement and develop artistic observation, the use of a unique series of books on visual appreciation is recommended as an optional study. Details are given in the Programmes.

#### MUSIC

It is hoped that most PNEU pupils will learn to play a musical instrument as well as to sing. We know that a high proportion do so, including musicians of outstanding promise. Music reading may be attempted where the teacher can read music herself.

Music appreciation should be part of every child's education and nowadays a gramophone, tape-recorder or cassette is normally available, even in homes where music may not be part of the home background. It can be approached by judicious selection, aided by the notes on famous composers printed in the PNEU Journal.

#### PHYSICAL EDUCATION

The adolescent will usually have a great interest in physical activity. Some will be on the way to showing great skill in a particular sport while others may be content to play a game for its own sake regardless of the standard reached. Fresh air, good nourishment, enough sleep and an active daily routine remain the best prescription for health and energy.

Care should be taken to see that a beginner does not attempt too much and that skilled advice is available. This warning extends to such matters as the preservation of life itself with Road Safety education and, in certain climates, knowledge of how to adjust to living conditions.

#### ASSESSMENT

1. A system of continuous assessment is an essential part of the PNEU Home Education Division. Its purpose for the pupil is to give him an opportunity to show what he has learnt and what progress has been made. The extent of progress in the syllabus contained in the PNEU programmes will be recorded by the teacher on the Assessment Form (R5) which also contains a section for comments on special features such as specific education difficulties or achievements. One of the uses of assessment over a period is for diagnostic purposes and the teacher will refer to earlier entries in order to bring to our attention any particular points which require explanation. Specimens of current work will accompany the form as specified below. Personal development will also be recorded.
2. The system also provides for self-assessment by the parent/teacher. We have thus incorporated a form of 'in-service training'. It is as important to help the teacher as the pupil since it will lead to the avoidance of unsatisfactory techniques and attitudes and to greater confidence. The teacher is asked to give frank comments on her performance, to comment on programmes and books used and to set out in full topics on which advice is sought.
3. The Assessment Form will be studied by your tutor and possibly by one of the expert subject advisers appointed by PNEU. They will write their comments on teacher and pupil and reply to queries and requests for advice on Form R6 which will then be returned to the teacher, a duplicate copy being retained by the tutor for future reference.

4. The assessment process should take place towards the end of each term, but if in the teacher's judgment, satisfactory progress is being maintained, the second term's return may be omitted. Teachers may, as at present, write for advice on any problem they encounter.
5. It must be stressed that the assessment process should be as intellectually rigorous as an examination. Specimens of work will be sent which illustrate the pupil's normal performance and which have been marked or commented on by the teacher in the usual manner. Comments on progress should be as objective as possible. Specimens of work should illustrate the pupil's standards, e.g. examples of poor spelling or poor mathematics, or, on the other hand, examples of high-quality work. Because it is virtually impossible to measure the effectiveness of narration at a distance, it is not a heading in the pupil's report. Reference should be made however to any difficulties encountered by the pupil or teacher over narration.
6. The same high standards of analysis should apply to the teacher's assessment of her performance. It is a unique opportunity to sit back and think about how the term has gone. The mere fact of writing down comments about teaching will in itself be beneficial. The tutor's comments will then be a further stimulus.

#### INSTRUCTIONS ON THE OPERATION OF THE ASSESSMENT SCHEME

#### PART A

##### PUPIL'S PROGRESS

###### 1. Comments

(a) During the last week of term, the teacher will prepare in duplicate the Assessment Form (R5) and retain one copy. Comments on each subject should be made in the light of the term's work carried out by the pupil. The teacher should complete the form with the pupil's work books available for perusal. Comments on oral work, where appropriate, e.g. fluency in narration, must be included.

###### 2. Specimens of Work

(a) Specimens must be on sheets of paper, even if the

work has to be copied from exercise books.

(b) The pupil's name must be clearly written on each piece of work and the work dated.

(c) Specimens will be returned if requested along with the tutor's comments on Form R6.

(d) Ages 9 and over. Specimens required:

English

(i) An example of the pupil's original work.

(ii) A sample of handwriting.

Mathematics

5 different examples of unaided work to indicate the stage reached.

Other Subjects

One recent example of unaided work to indicate the stage reached.

###### 3. Other Comments

Comments on the development of the pupil and any relevant comments on personality, willingness to work and general capacity should be given under the heading 'Other Comments'.

#### PART B

##### TEACHING ASSESSMENT

1. The teacher should set out the degree of success achieved to date in teaching, any set-backs or inadequacies, where methods have succeeded or failed, whether teacher-pupil relationships in the schoolroom are satisfactory, comments on classroom organisation, whether lesson preparation is adequate etc.
2. Under the second heading, comments on the suitability of programme syllabuses, on the books available to the pupil and on the supply of books and materials should be made.
3. Under the third heading, specific requests for help and advice should be given. These need not be limited to the space available on the form.

PART CTUTOR'S COMMENTS1. The Assessment Form (R6)

Tutors or Advisers will write their comments in each section:

A. For the pupil: B. For the teacher. Both general and particular aspects of performance will be singled out for mention.

2. A copy will be retained for record.

3. The two sets of comments may be separated by dividing the Form along the dotted lines, so that the pupil may be shown the tutor's remarks without the teacher disclosing the second set of comments.

THE PNEU LIBRARY

The PNEU library service is available, free of charge, for members, at home or overseas, who wish to use it. An initial deposit of at least £3.00 must be sent for postage.

The Catalogue, of over 4,000 books, has a key which gives some indication of the age for which each book is suitable. The Librarian is willing to choose the books if the age and tastes of the child are given.

A parcel weighing up to 4-lb. is normally made up either when a list of requests is received or when the choice is left to the Librarian, and is despatched monthly. The number of books in these parcels varies between two and five.

Members are requested to return books as soon as they have been read and in any case may not retain them for more than a month.

Further particulars may be obtained from the Librarian at PNEU headquarters in London.

*22 P30 CMC/10L*